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| APPLICATION NO. | FILING DATE | FIRST NAMED INVENTOR | ATTORNEY DOCKET NO. | CONFIRMATION NO. |
|---|-------------|----------------------|----------------------|------------------|
| 10/651,322 | 08/28/2003 | Yong Pan | 8441C | 7803 |
| 27752 | 7590 | 01/26/2006 | EXAMINER | |
| THE PROCTER & GAMBLE COMPANY INTELLECTUAL PROPERTY DIVISION WINTON HILL TECHNICAL CENTER - BOX 161 6110 CENTER HILL AVENUE CINCINNATI, OH 45224 | | | PARADISO, JOHN ROGER | |
| | | | ART UNIT | PAPER NUMBER |
| | | | 3721 | |

DATE MAILED: 01/26/2006

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

10/651,322

Applicant(s)

PAN ET AL.

Examiner

John R. Paradiso

Art Unit

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 09 November 2005.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-44 is/are pending in the application.
- 4a) Of the above claim(s) 16-34 is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-15 and 37-44 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- 1) ☐ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date _____.
- 4) ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____.
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: _____.

DETAILED ACTION

Response to Amendment

1. In view of the amendments filed 11/9/2005, the objections to the claims and the rejections to the claims under 35 U.S.C. § 112 are hereby withdrawn.

Claim Rejections - 35 USC § 103

2. The text of those sections of Title 35, U.S. Code not included in this action can be found in a prior Office action.
3. Claims 1-8 and 37-44 are rejected under 35 U.S.C. 103(a) as being unpatentable over CARR ET AL (US 6132781) in view of COLOMBO (US 6112890).

CARR ET AL discloses an atmosphere modifying device including an oxygen scavenger (28) (CARR ET AL column 6:16-25 and Fig. 5B) and a carbon dioxide emitter (40) (CARR ET AL column 3:26-36, 7:1-16, and Fig. 4).

CARR ET AL does not specifically disclose the atmosphere modifying device as being placed (wholly) in the produce container, nor does it disclose the CO₂ emitter as being the specified carbonate or acid, or of the ratio or particle size of said components.

COLOMBO discloses an atmosphere modifying device including a carbon dioxide emitter (16) adapted to be placed within a container (10).

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It would have been obvious to one of ordinary skill in the art at the time the invention was made to modify the invention of CARR ET AL by using a completely enclosable carbon dioxide emitter as part of the atmosphere modifying device, as taught by COLOMBO, in order to increase the flexibility and thus marketability of the system.

It would also have been obvious to one of ordinary skill in the art at the time the invention was made to make the CO₂ emitter of a carbonate from the claimed group and an organic acid, in order to simply and cheaply create CO₂, since it has been held to be within the general skill of a worker in the art to select a known material on the basis of its suitability for the intended use (in this case a common chemical reaction) as a matter of obvious design choice. *In re Leshin*, 125 USPQ 416.

It would also have been obvious to one of ordinary skill in the art at the time the invention was made to mix the carbonate and acid in the modified invention of CARR ET AL in the claimed ratios in order to produce the most efficacious amount of CO₂, since it has been held that discovering an optimum value of a result effective variable involves only routine skill in the art. *In re Boesch*, 617 F.2d 272, 205 USPQ 215 (CCPA 1980).

It would also have been obvious to one of ordinary skill in the art at the time the invention was made to make the particle size of the CO₂ emitter of CARR ET AL in the claimed dimensions in order to most effectively produce the desired CO₂, since it has been held that discovering an optimum value of a result effective variable involves only routine skill in the art. *In re Boesch*, 617 F.2d 272, 205 USPQ 215 (CCPA 1980).

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Regarding claim 8, the phrase "oxygen scavenger removes at a rate of about 5 cubic centimeters an hour or greater" is considered functional language and given little patentable weight.

Response to Arguments

4. Applicant's arguments filed 11/9/2005 have been fully considered but are considered moot in view of the new grounds of rejection.

Allowable Subject Matter

5. Claims 11 and 12 are allowed.

6. The following is an examiner's statement of reasons for allowance: the prior art could not alone or in combination anticipate or make obvious an atmosphere modifying device with a first compartment containing a CO₂ emitter, a second compartment containing an O₂ scavenger, and a third compartment containing an ethylene scavenger.

The most pertinent prior art, CARR ET AL and SCHVESTER ET AL, disclose the individual components of the CO₂ emitter, O₂ scavenger, and ethylene scavenger, but do not disclose putting them in separate compartments within an enclosure with gas permeable dividers.

Any comments considered necessary by applicant must be submitted no later than the payment of the issue fee and, to avoid processing delays, should preferably accompany the issue fee. Such submissions should be clearly labeled "Comments on Statement of Reasons for Allowance."

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Conclusion

7. **THIS ACTION IS MADE FINAL.** Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the mailing date of this final action.

8. Any inquiry concerning this communication or earlier communications from the examiner should be directed to John Paradiso. The examiner can normally be reached Monday-Friday, 9:30 p.m. – 6:00 p.m. (ET).

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Rinaldi Rada, can be reached at the number listed below.

Any inquiry of a general nature or relating to the status of this application should be directed to the 3700 Technology Center Receptionist.



Examiner John Paradiso: (703) 308-2825



Rinaldi I. Rada
Supervisory Patent Examiner
Group 3700

January 23, 2006

Additional Phone Numbers:

Supervisor Rinaldi Rada: (703) 308-2187

Fax (directly to Examiner) (703) 746-3253

Fax (Official): (571) 273-8300